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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Gerald Oberschmidt

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EXAMINER

DEAN, RAYMOND S

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/873,817	Applicant(s) OBERSCHMIDT ET AL.	
	Examiner Raymond S. Dean	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 20 - 24 and 30 - 33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20 - 24 and 30 - 33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 20 – 22, 24, and 30 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Judd (US 6,731,904) in view of Knapp (EP 0515728) and in further view of Hudson (US 6,680,902)

Regarding Claim 20, Judd teaches an active reflector for use in indoor wireless data communication systems (Figure 5, Column 3 lines 8 – 27, Column 6 lines 1 – 3, Column 6 lines 20 - 24) comprising transceiving means for receiving signals from a first mobile terminal and for transmitting the received signals to a second mobile terminal in an omni-directional way (Column 3 lines 8 – 41, Column 6 lines 45 – 48, Column 6 lines 59 – 61, the repeater can be used in an ad hoc system of mobile terminals, the broadcast antenna can transmit the received signals in an omni-directional way, the electronics module (60) is the transceiver) for direct communication with high data rates between mobile terminals in an indoor environment (Column 6 lines 57 – 58, LMDS has high data rates thus the repeater can operate in high data rate environments); wherein the active reflector does not comprise a baseband processing and does not influence

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the logical set-up of the indoor wireless data communication system (Column 3 lines 8 – 27, Column 6 lines 20 – 24, the repeater module receives a signal at a first RF frequency and retransmits said signal at a second RF frequency, the repeaters can be daisy chained to provide coverage so that mobile terminals that don't have a direct radio path due to obstructions in the building can communicate with one another).

Judd does not teach an active reflector that is mounted above the first and second mobile terminals in the indoor environment to provide an indirect line of sight connection between the active reflector and each mobile terminal.

Knapp teaches an active reflector that is mounted above the first and second mobile terminals in the indoor environment to provide an indirect line of sight connection between the active reflector and each mobile terminal (Figure 1, Column 3 lines 15 - 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the repeater orientation taught above in Knapp in the system of Judd for the purpose of creating reliable and optimal wireless links for the mobile terminals in the indoor environment as taught by Knapp.

Judd in view of Knapp does not teach an active reflector comprising one common antenna connected to the transceiving means and a local oscillator for controlling frequency division multiplexing of the signals transmitted and received via the common antenna.

Hudson teaches one common antenna connected to the transceiving means and a local oscillator for controlling frequency division multiplexing of the signals transmitted and received via the common antenna (Column 5 lines 4 – 14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the repeater of Judd in view of Knapp with the FDD circuitry of Hudson for the purposes of providing an alternative means of transmitting and receiving signals and providing FDD capability as the repeater of Judd in view of Knapp can operate in a 3G system, which comprises FDD capability.

Regarding Claim 21, Judd in view of Knapp and in further view of Hudson teaches all of the claimed limitations recited in Claim 20. Judd further teaches signal processing means coupled to said transceiving means for processing received signals (Column 3 lines 8 – 27, the repeater module receives a signal at a first RF frequency and retransmits said signal at a second RF frequency thus there will be a signal processing means that enables said frequency translation). Hudson further teaches a local oscillator means (Column 5 lines 4 – 14).

Regarding Claim 22, Judd in view of Knapp and in further view of Hudson teaches all of the claimed limitations recited in Claim 21. Judd further teaches at least one gain block (Figure 5, Amplifier (76) is the gain block).

Regarding Claim 24, Judd in view of Knapp and in further view of Hudson teaches all of the claimed limitations recited in Claim 21. Judd further teaches signal filtering means for filtering the received signals or the received and amplified signals (Figure 5, Filter (66)).

Regarding Claim 30, Judd in view of Knapp and in further view of Hudson teaches all of the claimed limitations recited in Claim 21. Judd further teaches wherein the signal processing means comprises a frequency translating means for changing the received signal frequency to another frequency, and transmitting the signal at the changed frequency to the mobile terminals (Column 3 lines 8 – 27, the repeater module receives a signal at a first RF frequency, translates, and retransmits said signal at a second RF frequency thus there will be a signal processing means comprising a frequency translating means that enables said frequency translation).

Regarding Claim 31, Judd in view of Knapp and in further view of Hudson teaches all of the claimed limitations recited in Claim 20. Judd further teaches means for communicating data with at least one further active reflector (Column 3 lines 8 – 27, Column 6 lines 20 – 24).

Regarding Claim 32, Judd in view of Knapp and in further view of Hudson teaches all of the claimed limitations recited in Claim 20. Judd further teaches wherein power for the active reflector is supplied by a power outlet for an indoor lamp (Figure 1, Column 3 lines 15 – 19).

Regarding Claim 33, Judd in view of Knapp and in further view of Hudson teaches all of the claimed limitations recited in Claim 20. Judd further teaches wherein the active reflector is integrated into a lamp (Figure 1, Column 3 lines 15 – 19, the fact that the repeaters have Edison sockets allows said repeaters to be integrated into a lamp).

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3. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Judd (US 6,731,904) in view of Knapp (EP 0515728) in view of Hudson (US 6,680,902) as applied to Claim 22 above, and further in view of Komara et al. (US 6,339,694).

Regarding Claim 23, Judd in view of Knapp and in further view of Hudson teaches all of the claimed limitations recited in Claim 22. Judd in view of Knapp and in further view of Hudson does not specifically teach wherein the gain block comprises more than one sub-gain block, whereby at least one of the sub-gain blocks can be switched off.

Komara teaches wherein the gain block comprises more than one sub-gain block, whereby at least one of the sub-gain blocks can be switched off (Figure 7, Column 5 lines 56 – 64, the overall gain of the output amplifier, which comprises sub gain blocks, is adjusted through the switching on/off of said sub gain blocks).

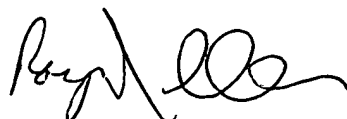
It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the adjustable gain method taught in Komara in the repeaters of Judd in view of Knapp and in further view of Hudson for the purpose of enabling the repeaters to effectively compensate for the attenuation of the data and voice signals due to path loss as said signals travel to said repeaters as taught by Komara.

**Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Raymond S. Dean  
November 14, 2005



**NAY MAUNG**  
**SUPERVISORY PATENT EXAMINER**